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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,717

01/27/2004

Mario W. Overhoff

OTC 020 P2

3823

7590

03/14/2006

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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/766,717	Applicant(s) OVERHOFF, MARIO W.	
	Examiner Albert J. Gagliardi	Art Unit 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Comment on Submissions***

1. This Office Action is responsive to submissions of 27 January 2004.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) and 1.84(o). The blocks, particularly in figure 3, are required to be labeled with descriptive legends.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show structural details of the nuclear detector, particularly the electric/electronic circuitry associated with the detector as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claims include a limitation of a balanced electrometer, but the specification (including the drawings), while reciting a balanced electrometer, does not provide a sufficient basis for one of ordinary skill in the art to determine the exact nature of such a device. As best understood, the balanced electrometer is merely an electrometer including some sort of circuit to reduce the effects of temperature drift.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 10 recite the limitation “said power supply.” There is insufficient antecedent basis for this limitation in the claim. For the purpose of this Office Action, the examiner assumes that the antecedent “power source” should be “power supply.”

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 1-4, 6, 9-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over IM-156/PD Ion chamber Survey Meter (1999), [online], retrieved on 3/11/06] from the Oak Ridge Associated Universities radiac collections database, (internet URL: <http://www.ornl.gov/PTP/collection/radiac/IM156.htm>), in view of Smart ION Advanced Ion Chamber Survey Meter (1997), [online], retrieved 3/11/06 from Dosimeter (internet URL <http://www.dosimeter.com/smart-ion.htm>); and White – US 2,995,661).

Regarding claim 1, *IM-156* discloses a nuclear detection and measurement system comprising: an ionization chamber (Detector), said chamber having a plurality of sidewalls (see generally top figure), one of said sidewalls having a window (see generally second figure).

Regarding the electrometer, although not specifically disclosed, the use of an electrometer in conjunction with ion chamber survey meters is well known (see for example *Smart Ion*) at paragraph 3) and considered routine in the art. Regarding the location of the electrometer as within the ionization chamber, *White* discloses that it has been common practice in the art to place electrometers within the ionization chamber of radiation detectors so as to prevent loss of sensitivity and accuracy while allowing for reduced adverse effects of moisture (col. 2, lines 18-30).

Regarding, as best understood, the electrometer being a balanced electrometer, *Smart Ion* discloses that the electrometer is a balanced electrometer including a dual transistor arrangement that reduces temperature related drift (paragraph three).

Regarding claim 2, in the system suggested by *IM-156* in view of *Smart Ion* and *White*, *Smart Ion* discloses that the detection and measurement system includes at least a housing, said housing enclosing said ionization chamber, the housing further including circuitry (inherent), a

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battery (see Special Features), a power source/supply (inherent), a microprocessor (obvious, if not inherent aspect in view of special features such as data logging, LCD display, remote calibration via a PC and various function keys), and an analog section, said analog section being intermediate and connected by circuitry to said ionization chamber and said microprocessor (obvious or inherent aspect of said device in view of the typical analog output of ionization chamber/electrometers detectors), the housing also having a display panel (see generally the first figure) and an on/off switch (obvious if not inherent design choice), the circuitry connecting the various components (inherent).

Regarding claim 3, in the system suggested by *IM-156* in view of *Smart Ion* and *White*, *Smart Ion* discloses that the detection and measurement system further includes a wireless link (i.e., infrared link), an RS232-port, an alarm as well as other communication facilities including remote calibration and survey data load/download (see generally Special Features).

Regarding additional features such as a GPS unit, those skilled in the art appreciate that location tracking is an important aspect of performing radiation surveys. In addition, those skilled in the art appreciate that a wide variety of location tracking means including GPS units are known in the art. Those skilled in the art also appreciate that GPS units allow for both reliable and automatic tracking. As such, the further inclusion of a GPS unit would have been an obvious design choice to allow for reliable and automatic location tracking while performing radiation surveys.

Regarding additional features such as a battery charger, although not specifically disclosed, those skilled in the art appreciate the use of rechargeable batteries and a charging

system are well known and viewed as a functionally equivalent alternative design choice depending on the needs of the application.

Regarding claim 4, *IM-156* discloses a handle (see generally the top figure). *Smart Ion* as applied above further suggests a plurality of connections. Regarding a point of attachment for a bar code reader, as noted above, location tracking and recording is well known in radiation surveys. While those skilled in the art appreciate that it is common to enter location information manually, the use of bar codes and bar code readers are well known for allowing faster entry of data and, absent some degree of criticality would have been a matter of routine design choice depending on the needs of the application.

Regarding claim 6, multi-range switches are routine in the art.

Regarding claims 9-12 and 14, the system recited in claims 9-12 and 14 is suggested by the system suggested according to claims 1-4 and 6 above, and is rejected accordingly.

9. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *IM-156* in view of *Smart Ion* and *White* as applied above, and further in view of *Nirschl* (US 3,614,444).

Regarding claims 5 and 13, in the system suggested by *IM-156* in view of *Smart Ion* and *White*, *Smart Ion* discloses that the detection and measurement system further includes a both a digital and graphical (simulated analog) display of the dose rate. Although *Smart Ion* does not disclose the graphical display as bar graph, such graphical displays are well known and considered a functionally equivalent design choice.

Regarding the display displaying both dose and dose rate, *Nirschl* discloses a survey meter with both dose and dose rate readout (Title). Those skilled in the art appreciate that a

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display of the dose allows for easy determination of the accumulated dose of a person performing the survey.

10. Claims 7-8 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *IM-156* in view of *Smart Ion* and *White* as applied above, and further in view of *Ainsworth* (US 3,814,940).

Regarding claims 7 and 15, *Ainsworth* discloses a portable nuclear radiation dosimeter wherein the ionization chamber includes a second ionization chamber and including a second electrode (see generally fig. 3). *Ainsworth* teaches that such an arrangement allows for a more versatile radiation detector that is able to measure both dose rate and dose, as well as a broader range of radiation (col. 1, lines 39-46; col. 2, lines 4-9). As such it would have been obvious to a person of ordinary skill in the art to modify the device suggested according to claim 1 such the ionization chamber encloses a second ionization chamber so as to allow for a more versatile device.

Regarding claims 8 and 16, as best understood, the use of a second balanced electrometer would have been an obvious design choice in view of the suggested first balanced electrometer.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi  
Primary Examiner  
Art Unit 2884

AJG